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HIQI 海清®

低噪音 · 高精度 · 快速 · 节能

Low noise . high precision . fast . energy saving

100-1380 Tons

HQ系列注塑机

HQ STYLE INJECTION MOLDING MACHINE



宁波市海清机械有限公司
NINGBO HAIQING MACHINERY CO., LTD.

宁波市典威机械有限公司
NINGBO DIANWEI MACHINERY CO., LTD.



OUR COMPANY

公司简介

宁波市海清机械有限公司、宁波市典威机械有限公司是注塑机专业研发、生产及销售为一体的企业，位于宁波塑机之乡---宁波小港，占地面积为20000平方米。现有员工200余人。公司自成立以来，投入大量资金进行新产品研发，先后成功研制“海清牌系列- HQ 和 HQT ”型两大系列精密注塑机，产品已到达10多个规格型号。

主要生产注射量45-8000克、合模力500-1180KN的数十种规格塑料注射成型机。公司为客户提供设计、减重、整线方案、产品设计、模具配套、成型注塑机选配一站式服务。

公司自创立以来，本着“质量第一、信誉至上、价格优惠、服务周到”的宗旨面向社会和广大用户；为了参与国际市场的竞争，公司通过人员优化组合，凝聚了一批高素质的具有开拓精神的经营、技术、管理人才；培养了一批具有高度责任感、能吃苦耐劳、技术精良的职工队伍；公司在产品的配置上，除采用全自动数控机床加工的高精度、高品质的机械零部件外，还配以进口于美、意、日、台湾等国家和地区的电器、液压部件，大大提高了整机的精度和稳定性。产品自投入市场以来，深得国内外用户的好评和信赖。

“宁波市海清机械有限公司、宁波市典威机械有限公司”迅速成为崛起在甬城塑机行业中的一颗新星。

公司奉行“以人为本、精益求精、开拓创新、和谐共赢”的宗旨，致力于为客户创造更多的价值，提供更完善服务。

Ning bo HAI QING Machinery Co., Ltd. Ning bo Dianwei Machinery Co., Ltd. is a professional R & D and injection molding machine production and sales as one of the enterprises, located in Ningbo town---Ningbo presses Kaohsiung, covers an area of 20000 square meters. Existing staff of more than 200 people. Since its inception, invested a lot of money for new product research and development, has successfully developed "HAIQING - HQ , HQT " two series of precision injection molding machine, the product has reached the size of the model more than 10.

The main production of injection volume of 45-8000grams, mold clamping force 500-1180KN dozens of specifications of plastic injection molding machine. Companies to provide customers with design, weight loss, the whole line of programs, product design, mold matching, molding injection molding machine, such as one-stop service selection.

The company since its inception, the spirit of "quality first, reputation first, price concessions, and thoughtful service" the purpose oriented society and the vast majority of users; in order to participate in international market competition, the company through the optimized combination of personnel, gather a group of high-quality and pioneering spirit of the business, technical and management personnel; cultivate a group of highly responsible sense, hard-working, skilled workers; the company in product configuration, mechanical parts in high precision and high quality automatic CNC machining of the outside, but also with imports in the United States, Italy, Japan, Taiwan and other countries and regions of the electrical and hydraulic parts, greatly improve the accuracy and stability. Since the product into the market, won the praise and trust of users at home and abroad. Ningbo HAIQING Machinery Co., Ltd. Ningbo DIANWEI Machinery Co., Ltd. "is rapidly becoming a new star rising in Yongcheng machinery industry in.

Companies adhere to the "people-oriented, excellence, pioneering and innovative, harmonious and win-win" purposes, committed to creating more value for customers, to provide better services.

我们的优势 Our advantage

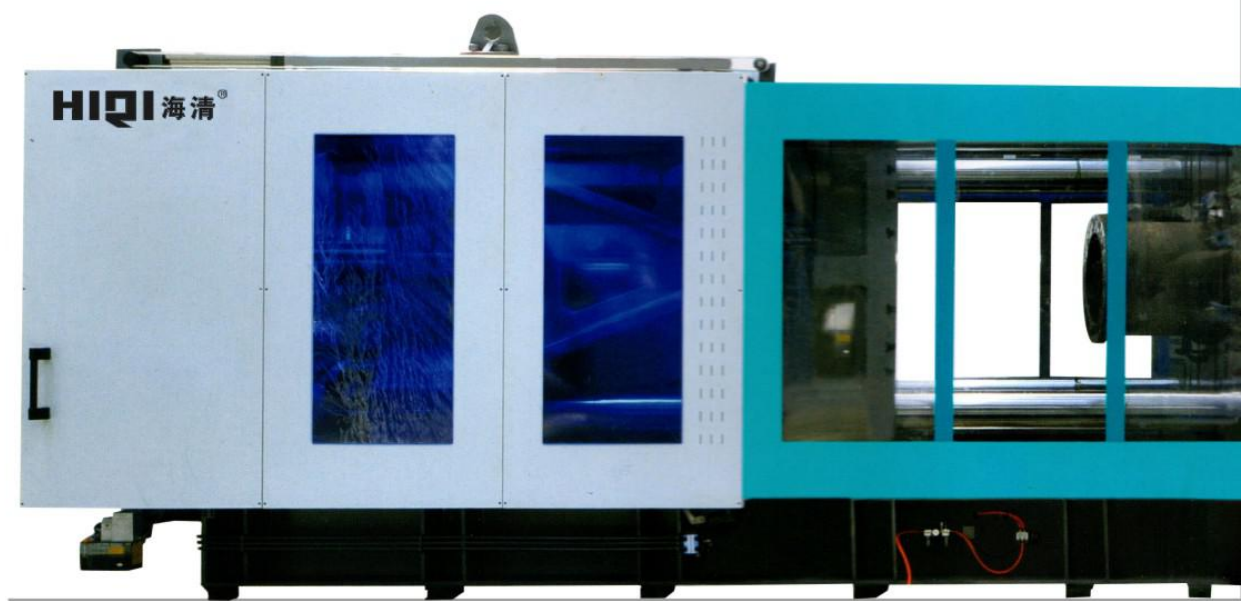
随着CNC和高精度加工设备的不断引进，使得产品质量和精度得到进一步的提高。

Excellent quality comes from strict, scientific production processes. In HACN, the quality of the product is considered to be the life of the company.

优良的品质来自严格的，科学的生产工艺。在海清产品的质量被认为是公司的生命。

With the introduction of CNC and high precision machining equipment, the quality and precision of products are improved.





專心專注做好注塑機，攜手共創未來

To focus on the injection molding machine

To create a better future





多适配性注射单元 INJECTION SYSTEM

Manufacturing

- ◆ 模块化设计，适应多种成型要求，注射精准平稳，双注射缸结构确保注射平稳有力。
- ◆ Modular design, to meet the needs of a variety of molding, injection accurate and stable, double injection cylinder structure to ensure smooth and stable injection.

Precise injection, stable operation

注射精准、运行平稳 ▶▶▶

采用短捷有力的双缸射出系统和高精度线性导轨，配合低惯量高响应射出机构，确保射出动作平稳及定模板无变形，优化设计螺杆组件，达到更好的塑化效果。自动清料，防流涎、防冷启动延时等功能，确保工作的高效、简便、安全。

A short powerful double cylinder injection system and high precision linear guide rail, with low inertia and high response mechanism to ensure smooth injection, injection and template deformation, optimization design of screw assembly, achieve better plasticizing effect. Automatic cleaning bucket, anti salivation, anti cold start delay function, ensure the efficient, convenient and safe.

- 双缸平衡注射系统
- 配置多种直径螺杆
- 超宽的射速调整范围，可以适应更多的产品成型加工
- 注塑和塑化过程始终低机械摩擦阻力，并均匀，注塑和熔胶过程更稳定，重复性精度高
- 具备位置、压力、时间随意选择的保压切换功能，调试工艺更轻松便捷
- 通过特别的控制原理，可以实现精密计量控制，注塑重量偏差可达5%。
- 注射机构紧凑，进一步提高稳定性
- 保压及背压设定
- 精密PID温度控制，温度控制精度可达 $\pm 0.5^{\circ}\text{C}$
- 防滑铝花纹盖板
- 双射移油缸平衡于料筒两侧，确保射嘴不偏移，密封性好，不容易漏胶（3580KN及以上）
- 注射行程电子尺控制
- 防流涎功能
- 自动清料功能
- 高速油马达驱动螺杆预塑装置
- 螺杆冷启动（防止）功能
- 射出防护罩
- 料筒自动热功能
- 喷嘴对中微调装置
- 螺杆测速装置
- 螺杆倒索防流涎装置
- Cylinder balance injection system
- Configure a variety of screw diameter
- The rate of fire wide range of adjustment to accommodate more products forming
- Injection and plasticizing process is always low mechanical friction and uniform, plastic injection molding and melting process is more stable, high repeatability
- Have a position, pressure, dwell time above and select the switching function, debugging process more easy and convenient
- By special control principle, can achieve precise metering control, injection weight deviation of up to 5%
- Injection compact body, to further improve the stability
- Holding pressure and back pressure settings
- Precise PID temperature control, temperature control accuracy up to $\pm 0.5^{\circ}\text{C}$
- Non-slip aluminum tread plate
- Bijective shift the balance on both sides of the cylinder barrel, make sure the nozzle is not offset, sealing, and not easy to leak glue (3580KN and above)
- Electronic foot control injection stroke
- Anti salivation function
- Automatic function clear material
- High-speed motor-driven screw oil pre-plastic device
- Screw cold start (prevention) function
- Injection shield
- Cylinder automatic heating function
- Fine adjustment of nozzle device
- Screw speed measuring device
- Screw down cable anti salivation device





高缸性锁模单元 CLAMPING SYSTEM

High Rigid Clamping Unit

- ◆ 五支点肘杆机构经先进电脑优化，并以有限元分析指导最佳结构设计，确保锁模机构之刚性和强度，独特的动板滚轮机构，确保机构运动的平衡与静音，内置式机械安全机构，无需调整，安全性高，完备的润滑系统保护合模机构的使用精度与寿命。
- ◆ The five pivot toggle mechanism by advanced computer optimization, and the finite element analysis of guiding the optimal structure design, ensure the locking mechanism of rigidity and strength, plate roller mechanism dynamic unique, ensure the balance and use the built-in mute mechanism, mechanical safety mechanism, without adjustment, high safety, accuracy and life of lubricating protection system complete locking mechanism.

Template just woke up, running smoothly 模板刚醒强、运行平稳 ▶▶▶

规格加大、容模范围更广泛、模板刚性强化、保护大柱及模具，免润材料使用、洁净环保且美观、内藏式安全杆、免调整安全性高。

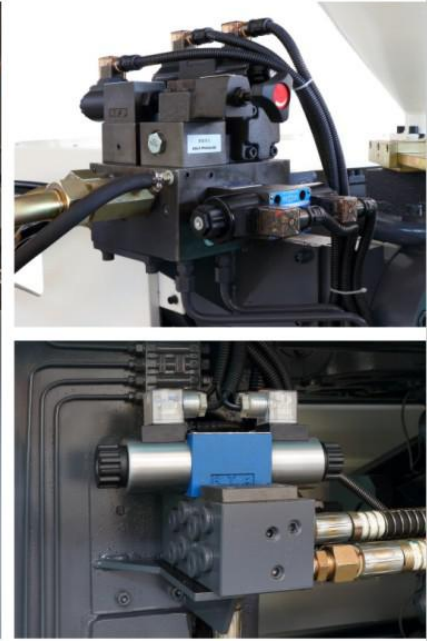
Specifications, increase capacity of mold more widely, strengthen the protection of large, rigid template columns and die, free use of material, environmental protection and clean and smooth appearance, built-in safety bar, free high security adjustment.



- 机铰运动参数采用五点式机铰设计专用软件进行优化，使动模板运动更为顺畅
- 高刚性优化箱式模板，保证模具受力均匀，注塑无飞边，延长模具寿命
- 配合高电脑处理器的运动控制模块，快速运动无冲击，显著延长机器和模具的寿命
- 微速开模功能，大幅度提高产品脱模时的低速稳定性
- 机械、电气双重安全联锁保护（3580KN以上有液压保护）
- 拉杆特殊工艺处理、强度可靠
- 低压模具保护装置
- 自动调模功能
- 特快锁模功能，提升生产效率
- 高压自动集中润滑系统
- 强化处理动模板移动耐磨轨道
- 多种液压顶出模式
- 滚轮可调节式动模板支撑结构
- 抽芯动作方式选择(可任选)
- 液压油马达驱动齿圈调模
- 开关模、顶出位置尺控制
- 数控四段开关模压力、速度、位置控制
- 机械手机械安装定位接口

- Machine hinge motion parameters using a five-point machine hinge design special software to optimize the movement of the movable template smoother.
- High rigidity optimization box template to ensure uniform force mold, injection without flash, extend tool life
- Computer processor with high motion control module, fast motion without impact, significantly extend the life of the machine and mold
- Low-speed stability of the micro-mold function, greatly improving product release time
- Mechanical, electrical double safety interlock protection (with hydraulic protection 3580KN more)
- Rod special treatment, reliable strength
- Low-pressure mold protection device
- Auto mode function
- Express clamping function, improve production efficiency
- High pressure automatic centralized lubrication system
- Enhanced treatment movable platen moves wearable track
- Multiple hydraulic ejector mode
- Movable platen roller adjustable support structure
- Pulling operation mode selector (optionally)
- Motor-driven hydraulic oil ring tone mode
- Switch mode, the top of the foot control position
- CNC four switch-mode pressure, velocity, position control
- Mechanical installation manipulator positioning Interface





稳定可靠的液压系统 HYDRAULIC SYSTEM

Stable Hydraulic system

- ◆ 液压系统设计先进，通过压力、流量比例控制实现快速多级压力、速度切换、系统配置合理，先进、工作稳定可靠，噪声低于75dB,中大型机采用二通插装阀系统，提高了系统的通流量及响应速度，使得整机性能达到最佳。
- ◆ The hydraulic system is advanced by pressure and flow proportional control to achieve fast multi-stage pressure and speed switching, system configuration is reasonable, advanced, stable and reliable operation, the noise is lower than 75dB, in a large machine using two cartridge valve system, improve the system flow and response speed, which makes the best performance.

Fast response and stable output

快速响应、稳定输出 ▶▶▶

高精度电脑控制器和高美结合，省电22%~55%，经济效率高。整体速度提升20%以上，行机效率高，令多模穴成型更稳定。

高精度进油过滤器全流量过滤油路，有效地防止液压油的污染和劣化，从而使油泵、油阀等液压元件运行更平稳，液压密封件寿命更长。

High precision computer controller combined with high quality, power saving 22%~55%, high economic efficiency. The overall speed of more than 20%, the high efficiency of the machine, So that the formation of multi hole more stable.

High precision oil filter full flow filter oil circuit, effectively prevent the pollution and deterioration of hydraulic oil, So that the oil pump, oil valves and other hydraulic components to run more smoothly, hydraulic seals longer life.

可靠并值得信赖的系统 CONTROL SYSTEM

Reliable Control System

- ◆ 更卓越的操作性能，人性化操作界面，提升机器灵敏度及稳定性，线上曲线检测功能及中央连线管理，丰富的SPC品质管理界面，绝对是您创造利润的最佳利器。
- ◆ Operation excellence performance, user-friendly interface, enhance the sensitivity and stability of the machine, line curve detection function and central connection management, rich SPC quality management interface, is absolutely the best weapon of your profit.



Fast reaction speed, stable system

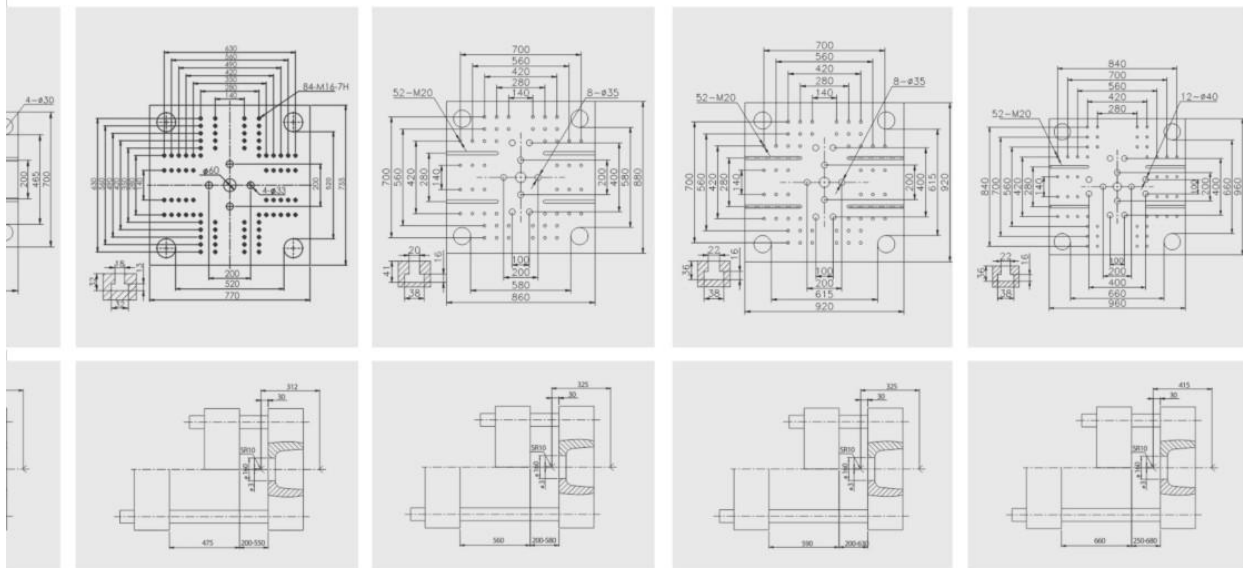
反应速度快，系统稳定 ▶▶▶

TFT液晶彩色显示屏，色彩饱满，画面细腻
嵌入式LINUX系统，视窗风格界面
机器操作实时动画显示
成品参数记录，方便成品品质检查
高精度位移传感器系统，控制精度为 $\pm 0.2\text{mm}$
采用模糊预测技术，温度控制精度为 $\pm 1^\circ\text{C}$
多路输入/输出端口，端口功能可随意配置
具备输出可编程功能
支持USB和网络接口（选配）
参数资料保护锁，并带有断电自动保存功能
超容量的数据存储功能

TFT LCD color display, full color, delicate screen
Embedded LINUX system, windows style interface
Real time animation of machine operation
Record of finished product parameters to facilitate inspection of finished products
High precision displacement sensor system, control accuracy of $\pm 0.2\text{mm}$
The fuzzy control technology is adopted, and the precision of temperature control is 1°C
Multi input / output port, port function can be configured
With output programmable function
Support USB and network interface (optional)
Parameter data protection lock with power save function
Super capacity data storage



HQ-198			HQ-238			HQ-268			HQ-300			HQ-328		
B	C	A	B	C	A	B	C	A	B	C	A	B	C	
45	50	45	50	55	55	60	65	60	65	70	65	70	75	
20	18.5	22	20	18.5	23	21	19	23	21	19	23	22	20	
358	442	342	456	551	677	805	945	805	965	1080	1161	1347	1546	
326	402	311	415	502	615	732	860	732	860	985	1051	1226	1407	
177	143	207	177	143	200	168	143	200	168	143	214	182	157	
200			171			178			190			192		
1780			2380			2780			3000			3280		
470			475			560			590			660		
520×460			520×520			580×580			615×615			660×660		
520			540			580			630			680		
180			200			200			200			250		
135			140			150			150			160		
46			62			62			70			62		
15			18.5			22			30			37		
18			24			29.5			39			49		
9.9			11.5			13.5			18.3			22.8		
5.3×1.5×2.3			5.45×1.5×2.3			5.8×1.58×2.3			5.98×1.66×2.35			6.9×1.85×2.35		
6.5			6.9			8.5			10			12		



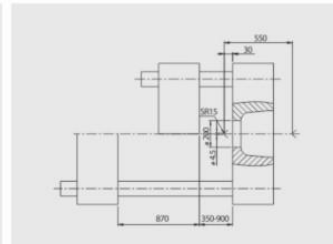
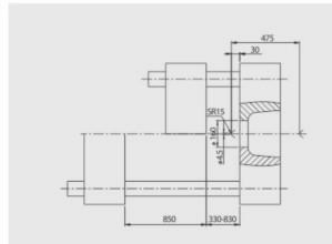
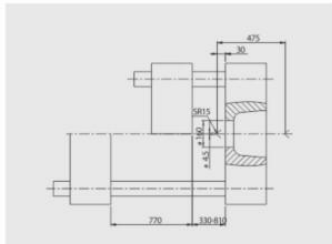
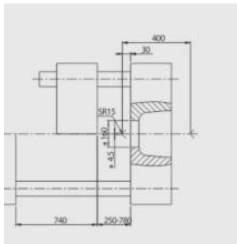
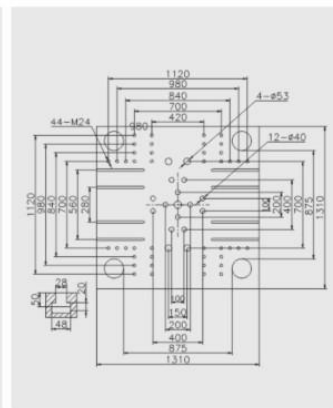
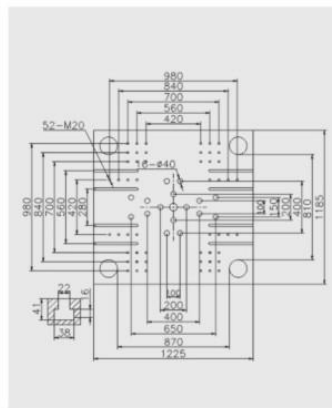
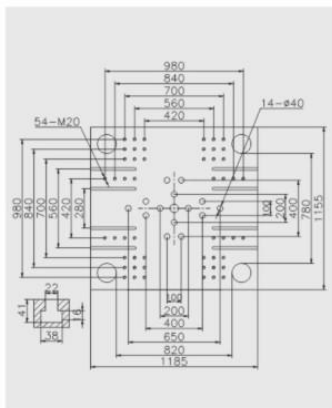
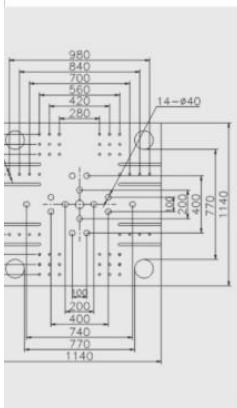
HQ-238

HQ-268

HQ-300

HQ-328

HQ-450				HQ-528				HQ-550				HQ-628			
C	A	B	C	A	B	C	D	A	B	C	D	A	B	C	D
80	70	75	80	75	80	85	90	75	80	85	90	90	95	100	105
19	22	20	19	23	21	20	20	23	21	20	20	23	21	20	19
1960	1501	1723	1960	1727	1965	2219	2487	1727	1965	2219	2487	2544	2834	3140	3412
1784	1366	1568	1784	1572	1788	2019	2264	1572	1788	2019	2264	2315	2579	2857	3150
133	199	173	152	191	168	148	132	191	168	148	132	184	165	149	135
169				138				138				149			
4500				5280				5500				6280			
740				770				850				870			
770×770				820×780				870×820				875×875			
780				810				830				900			
240				330				330				350			
200				200				265				250			
110				150				150				150			
45				55				55				30+37			
59				59				59				80			
29.5				33.5				33.5				42.8			
7.5×1.95×2.4				8.5×2.2×2.8				8.5×2.2×2.8				10.2×2.2×2.71			
20				25				27				32			



HQ-450

HQ-528

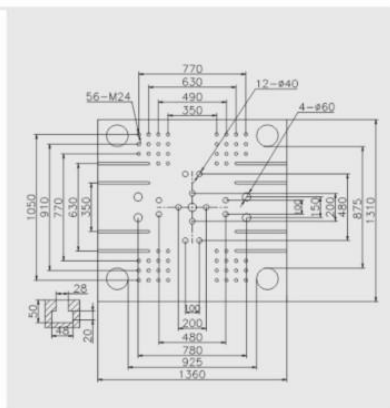
HQ-550

HQ-628

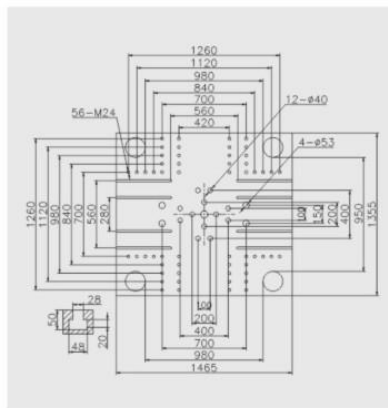
说明	DESCRIPTION	UNIT	HQ-650				HQ-750				
注射装置	INJECTION UNIT		A	B	C	D	A	B	C	D	A
螺杆直径	Screw diameter	mm	90	95	100	105	90	95	105	110	90
螺杆长径比	Screw L/D ratio	L/D	23	21	20	19	23	21	20	18.5	23
理论注射容积	Theoretical shot volume	cm ³	2736	3048	3377	3723	2925	3259	3982	4369	2990
注射重量	Shot weight (PS)	g	2489	2744	3073	3388	2662	2966	3623	3977	2721
注射压力	Injection pressure	Mpa	184	165	149	135	194	174	143	130	194
螺杆转速	Max.screw speed	rpm	149				110				
锁模系统	CLAMPING UNIT										
锁模力	Clamping force	kN	6500				7500				
开模行程	Opening stroke	mm	900				950				
拉杆内间距	Distance between tie-bars	mm	925x875				980x950				
最大模厚	Max mold height	mm	900				960				
最小模厚	Min. mold height	mm	330				400				
顶出行程	Ejector stroke	mm	335				280				
顶出力	Ejector force	kN	150				210				
其它	OTHERS										
电马达功率	Drive power	KW	30+37				37+37				
伺服马达功率	Servo drive power	KW	80				98				
电热功率	Heating capacity	KW	42.8				54.3				
外形尺寸	Machine dimensions	m	10.2x2.2x2.71				11.43x2.4x3.14				
机器重量	Machine weight	t	35				42				

模板尺寸

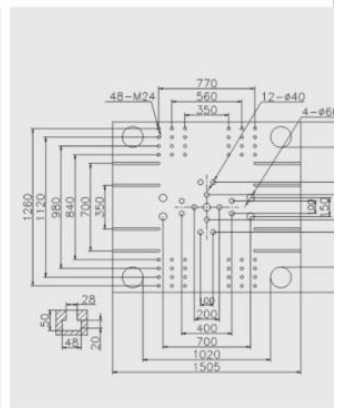
PLATEN DIMENSION



HQ-650

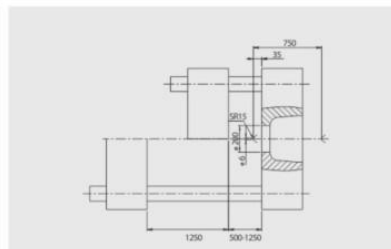
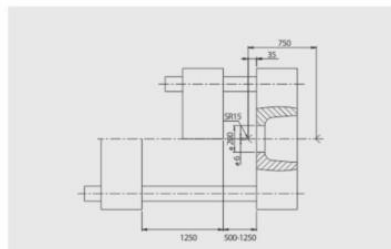
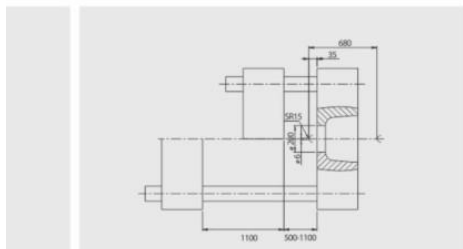
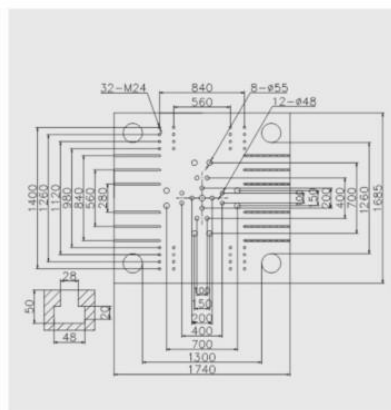
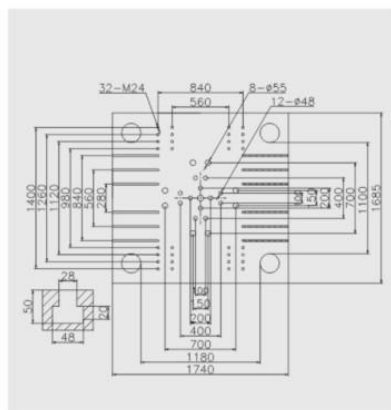
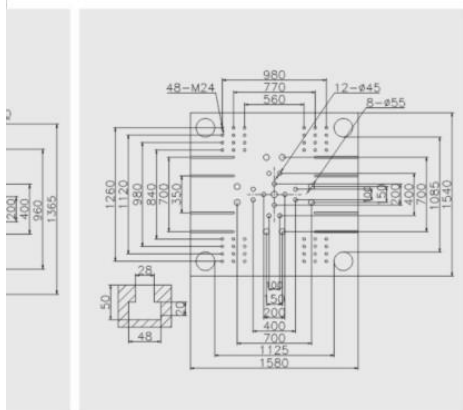


HQ-750



HQ-800

HQ-800			HQ-900			HQ-1180				HQ-1300		
B	C	D	A	B	C	A	B	C	D	A	B	C
95	105	110	95	100	105	100	110	120	130	120	130	140
21	20	18.5	23	21	20	23	21	20	18.5	24	22.2	20.6
3331	4070	4467	3544	3927	4330	4365	5282	6285	7377	6218	7297	8463
3032	3703	4065	3225	3574	3941	3972	4805	5720	6712	5658	6640	7701
174	143	130	171	155	140	206	170	143	122	172	146.6	126.4
110			108			106				90		
8000			9000			11800				13000		
1000			1100			1250				1350		
1020x960			1125x1085			1180x1100				1300x1260		
960			1100			1250				1300		
400			500			500				550		
300			315			325				350		
210			216			245				235		
37+37			45+45			55+37				55+55		
98			118			118				125		
54.3			60			60				60		
11.43x2.4x3.14			11.7x2.8x3			12.5x2.6x2.85				13.7x3.1x3.5		
45			50			55				66		



HQ-900

HQ-1180

HQ-1300

设备配置 DEVICE CONFIGURATION

A标准设置

Standard Features for DFK & Series

注射部分

氮化螺杆料筒
高扭力低转速油马达
倒索装置
加长射嘴
防止低温时螺杆提前开动的装置
三级射胶行程控制
二级保压及熔胶控制
注射位置直线电子尺控制
不锈钢料斗

Injection Unit

Nitride screw barrel
High torque low speed oil motor
Reverse cable device
Lengthened nozzle
Device for preventing screw rod from moving in advance at low temperature
Three stage injection process control
Two stage pressure and melt control
Injection position linear electronic ruler control
Stainless steel hopper



锁模部分

五点式双机铰锁模装置
液压单抽装置
自动调模装置
镀硬铬合金钢构立柱
低压模具保护设定
双重电气及机械式安全设置
卸料斗及电眼控制周期复始
顶出停留、多次顶出、震动顶出
三段式锁模行程控制
直线电子尺控制锁模位置

Clamping Unit

Five point double machine hinge clamping device
Hydraulic single pumping unit
Automatic mould adjusting device
Hard chrome plated alloy steel column
Low pressure mold protection setting
Dual electrical and mechanical safety settings
Hopper and electric eye control cycle begins
Top out stop, multiple top out, shake out the top
Three stage mode locking stroke control
Linear electronic ruler control mode locking position



控制部分

时间射胶控制
PID温度控制
机械手控制接口

Control Unit

Time radio control
PID temperature control
Manipulator control interface

Rexroth
Bosch Group

液压及其他部分

自动润滑装置
进口液压元件
油温过高警报装置
旁通过滤器装置

Hydraulic Unit and Others

Automatic lubricating device
Imported hydraulic components
High temperature alarm device
Bypass filter device



B选购设置

Optional Features for DFK & DFJ Series

注射部分

特殊螺杆料筒
溶胶筒保温罩
加长射嘴
储能器特快射胶装置
移动卸料斗装置
标准卸料斗装置



Injection Unit

Special screw barrel
Sol cylinder thermal insulation cover
Lengthened nozzle
Energy storage device special express
Movable unloading hopper device
Standard discharge hopper device

锁模部分

吹风装置
液压安全锁装置
液压多抽芯系统装置



Clamping Unit

Blowing device
Hydraulic safety lock device
Hydraulic multi core pulling system device

控制部分

加装机械手电器接线及程序
熔胶马达转速显示
比例熔胶背压控制



Control Unit

Installation of mechanical and electrical wiring and procedures
Sol motor speed display
The proportion of melt pressure control

吹气装置

PVC风机装置
液压及其他部分
半闭环控制系统
冷却水流量计及温度计
油位过低警报装置
油温感应调节冷却水控制装置



Blowing device

PVC fan device
Hydraulic and other parts
Semi closed loop control system
Cooling water flow meter and thermometer
Low oil level alarm device
The temperature induced regulation of cooling water control device



全程追踪，真诚服务

Optional Features for DFK & DFJ Series

• 售前服务

热线咨询（产品及技术），可根据客户要求度身设计。

• Before-Sales Service

Hotline consultation (products and Technology), according to customer requirements of the design.

• 售中服务

提供产品安装调试服务□以及使用知识培训。

• Mid-Sales Service

Provide product installation and commissioning services, and use knowledge training

• 售后服务

全天候维修服务，整机三包一年。并提供产品升级或改装等其他服务。

• After-Sales Service

Around the clock service, the whole machine three packs a year. And to provide product upgrades or other services such as modification

备注 Remarks

理论注射容量=（注塑机）料筒截面积X螺杆行程
注射重量为PS理论容量91%
塑化能力、注射速率为PS值

Theoretical injection capacity=sectional area of charging barrel(of injection molder) X screw stroke
Injection weight is 91% of PS theoretical capacity
Plasticizing capacity and injection rate are PS values.

因产品不断研究改良，本公司保留设计参数及配置的变更权，如有变更，恕不另行通知。所有解释权以中文解释为准。
产品照片仅供参考，与出售实物略有不同。

Because of the products' constant research and innovation,
our company reserves the right to change the design parameters and configuration;
in case of any change, there will be no further notice. The interpretation in Chinese shall prevail.

宁波市海清机械有限公司

Ningbo Haiqing Machinery Co., Ltd

宁波市典威机械有限公司

Ningbo Dianwei Machinery Co., Ltd

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